# NOTES

## RELATION OF THE STATE TO IRRIGATION

The object of this paper is to show the relation of the canal-builder or irrigation farmer to any public authority, either national, state, or local, and either administrative or judicial.

### THE NATIONAL GOVERNMENT

The legal status of the non-navigable streams of the arid region was stated by the United States Circuit Court for the District of Montana in Howell *vs.* Johnson, as follows:

> The national government is the owner of all the lands of Wyoming and Montana which it has not sold or granted to someone competent to take and hold the same. Being the owner of these lands, it has the power to sell or dispose of any estate therein or any part thereof. The water in an unnavigable stream flowing over the public domain is a part thereof, and the national government can sell or grant the same, or the use thereof, separate from the rest of the estate, under such conditions as may seem to it proper. (89 Fed., 556.)

In the exercise of its power to deal with the public lands as it deems proper, the general government in 1866 passed a law recognizing the local customs, laws, and decisions governing water rights, and granting to ditchbuilders rights of way over the public domain. In 1870 this law was amended by providing that all lands acquired from the government from that time forth should be subject to rights of way for irrigation works and that the patents issued should expressly state this fact. The Desert Land Act, passed in 1877, further recognized the rights to divert water on the public lands for irrigation, mining, and manufacturing purposes. An amendment to the Timber-Culture Act passed in 1891 provided "that the privileges herein granted shall not be construed to interfere with the control of the water for irrigation and other purposes under the authority of the respective states and territories." In the United States *vs.* Rio Grande Irrigation Company (174 U. S. 704) the Supreme Court of the United States said in regard to the acts above referred to: "Obviously by these acts, so far as they extend, Congress recognized and assented to the appropriation of water in

contravention of the common-law rule as to continuous flow." The court then sums up the matter as follows:

> The unquestioned rule of the common law was that every riparian owner was entitled to the continued natural flow of the stream, but every state has the power within its dominion to change this rule and permit the appropriation of flowing waters for such purposes as it deems wise.

Congress showed its continued intention to leave this matter entirely with the states in the passage of what is known as the Reclamation Law, approved June 17, 1902. Section 8 of this law provides that

> nothing in this act shall be construed as affecting, or intending to affect, or to in any way interfere with the laws of any state or territory relating to the control, appropriation, use, or distribution of water used in irrigation, or any vested rights acquired thereunder, and the secretary of the interior in carrying out the provisions of this act shall proceed in conformity with such laws.

It is further contended by many that in the admission of the state of Wyoming, with a clause in its constitution providing that "the water of all natural streams, springs, lakes, or other collections of still water within the boundaries of the state are hereby declared to be the property of the state," Congress still further abrogated any right to control irrigation which the general government may have had.

All the decisions and statutes referred to heretofore refer to non-navigable streams. The control of navigable streams is in the general government, and is by law committed to the War Department. The diversion of any water from a navigable stream requires either a special act of Congress or the permission of the secretary of war. Navigability is held to be a question of fact, which must be determined in each particular case. The case of the United States *vs.* the Rio Grande Irrigation Company, which was referred to above, was one in which the navigability of the Rio Grande was the main question at issue, and there is pending at present before the War Department an application to divert water from the Sacramento River, which is held to be navigable, the question in this case being as to whether the proposed diversion would interfere with the navigability of this stream. Most of the streams of the arid region, while not navigable, are tributaries of navigable streams, and there is an opportunity here for conflict as to whether any particular stream is under one jurisdiction or the other. The United States will undoubtedly claim the right to restrain any

diversion which interferes with the navigability of a stream, whether made from the stream itself or from a non-navigable tributary. With this limitation, the non-navigable streams are subject to state control.

### THE STATES AND TERRITORIES

Each of the states and territories in the arid region has made some provision for controlling the diversion and use of the water of the streams within its boundaries. Settlers came into this region, and found it necessary to take water from streams and use it in placer-mining or in irrigation, and where water was scarce conflicts soon arose between parties wishing to use the same supply. This condition brought about the adoption of local customs, and the enactment of laws for the purpose of preserving peace and the protection of property. The passage of these laws has been repeatedly upheld by the state courts as a proper exercise of the police powers of the states.[1] Their recognition by Congress has already been referred to.

These laws may be divided into four classes: those dealing with the acquirement of rights, those dealing with the defining of rights, those dealing with the administration of rights, and those miscellaneous provisions not coming within any of the other classes.

### ACQUIREMENT OF RIGHTS

The earliest laws dealing with the acquirement of rights provided for the posting of notices at the point of intended diversion, and the filing of copies of these notices with some county officer. These notices were to state the name of the appropriator, describe the point of intended diversion, the means of diversion, and the quantity of water claimed. There was no limit placed upon what might be claimed, and no provision for any record of what was done to carry out the plans outlined in the notices posted. The purpose of such notice was, of course, to give notice to anyone interested that the water was already appropriated and that rights to its use could not be acquired by others. There has never been any claim that the posting of such a notice in itself gave any right to water. The laws provided that the posting must be followed by the construction of works and the application of the water to the use intended. The records did not, therefore, serve the purpose of

[1] New Cache la Poudre Irrigation Company vs. Left Hand Ditch Company, 18 Colo., 469; Farmers Irrigation District vs. Frank, 100 N. W. 286 (Nebr.).

an index to existing rights, and never have been of any especial value, either to those posting them or to subsequent appropriators. Their only legal effect is to date the right of the one posting them to the time the notice was posted, in case it is followed by construction and use within the prescribed time. All sorts of fantastic and indefinite notices have been recorded, the claims in most cases aggregating many times what the stream can supply.

Such laws have been enacted at one time or another in practically all the states of the arid region, and are still in many the only requirements—Arizona, California, Washington, Oregon, Montana, Kansas, Texas, New Mexico, and Colorado. Colorado, has, however, provided for the filing of these notices with the state engineer, as well as with county officials, and for the filing with claims of maps and specifications, showing the location and dimensions of the proposed works. The engineer is given authority to return for correction any maps and statements which do not clearly show what is claimed; but so long as they show plainly what is claimed, no matter how ridiculous or unreasonable the claims, the engineer must approve them. This change in the Colorado law in itself is of little value, as there is still no provision for any records of what is done under the plans filed. It is, however, a step toward the better system which has been adopted in the other states, which will be described later; but it has this disadvantage: the engineer is required to give his approval, which under the law means nothing, to plans which he may know can never be carried out, and to claims to water from streams already over-appropriated. With such approved plans unprincipled promoters may go into regions where people are unfamiliar with water-right conditions in the arid region, and represent that they have a right to the quantity of water claimed, and sell rights to water which they do not possess, and present their plans approved by the engineer as evidence of their rights.

On its admission as a state in 1890, Wyoming adopted a different system of laws governing the acquirement of water rights. The constitution of the state declares that "the waters of all natural streams, springs, lakes, or collections of still water within the boundaries of the state are hereby declared to be the property of the state," and the laws enacted by the first legislature of the state provided for the granting of water rights by state officials. The party wishing to acquire a right must make application to the state

engineer, giving the location and description of the proposed works, and a description by legal subdivisions of the land to be irrigated. The state engineer may return applications for correction, or may reject them if there is no unappropriated water in the source of supply, or if the approval of the application is, in his opinion, contrary to public policy, or if the applicant fails to show his financial ability to carry out the project. The law provides that the work must begin within a specified time, the works must be completed within a specified time, and, before receiving a final certificate of his right, the applicant must prove that the works have been constructed in accordance with the approved application, and that the water has been applied to the use specified in the application. This proof consists of a sworn statement by the applicant, and an examination by the state engineer or one of his subordinates. When satisfactory proof is made, the state engineer issues to the applicant a certificate stating what rights he has acquired. The supreme court of the state has held that the provision of the Wyoming constitution, that the water belongs to the state, means the same as the provision of the Colorado constitution, that the water belongs to the public, and that the state is dealing with this water supply as sovereign and not as proprietor; but it has nevertheless upheld these laws, giving the power to reject applications for reasons of public policy.

Since adoption of this system in Wyoming it has been adopted, with modifications, by Nebraska, Utah, Idaho, Nevada, North Dakota, South Dakota, and Oklahoma. Nebraska, Nevada, North Dakota, South Dakota, and Oklahoma have followed Wyoming in giving the state engineer right to reject applications for reason of public policy. Utah adopted this provision, and the state engineer, under the law, rejected one application, namely, for use of the waters of Grand River for development of power at the lower end of a valley of considerable size. The water of the river has never been used for either irrigation or power, but the engineer held that its value for irrigation would far outweigh its value for the development of power, and that the granting of a right to use the stream for the development of power at the lower end of the valley would forever bar its use for irrigation in this valley, and therefore the granting of this right for power purposes was contrary to public policy. The matter was appealed to the courts, and decided against the engineer; and at the next session of the legisla-

ture the law was amended, taking away from the engineer the right to reject applications "where there is no unappropriated water in the proposed source of supply, or where the proposed use will conflict with prior applications or with existing rights."

The Idaho law provides that the engineer must approve any application which is in proper form. This law is open to the same objection made to the Colorado law providing that the engineer must approve any filing which clearly presents the claims made. The engineer is compelled to give his approval to any application filed, although the fact may be notorious that there is no unappropriated water in the source of supply, and although he may know that the party making the application is unable to carry out the plans specified. Parties with no more investment than the filing fee may secure an approved application, which may be used to defraud innocent purchasers unfamiliar with the Idaho law. The writer visited the office of a land and water company which had made no more investment than the filing fees and the cost of a few preliminary surveys. This company was advertising extensively, and was at least attempting to sell, water rights for a tract of government land which, under their plan, was to be secured by settlers under the Desert-Land Act. It had an application approved by the state engineer as an evidence of title to water, while, as a matter of fact, the approved application conveys no right unless it is followed by the construction of works and the application of water to lands. This proceeding might be compared to the issuing of a certified check to a party who has no money on deposit, and explained by the bank as meaning, not that the party had money on deposit, but merely that, if he should deposit money, he would have the right to draw it out. The application approved by the engineer means no more than that, if there should be water in the stream which does not belong to someone else, and the applicant builds the necessary works and uses the water, he will acquire a right to it. There is, however, this check upon extravagant claims in Idaho: The law provides that claimants shall pay a fee of one dollar for the first cubic foot per second, and ten cents for each additional cubic foot per second claimed. While the writer was in the office of the engineer of Idaho during the past summer, an application was filed for 4,000 cubic feet of water per second from a stream which never carries more than 40 cubic feet per second. With this application was a filing fee of $40, when it should have been

$400.90. The engineer at once returned the application with the statement that the fee was $400.90 instead of $40, and in all probability this application, when it returns, will be cut down to the flow of the stream. Ten cents per cubic foot per second is not a burdensome charge on legitimate enterprise, but it is too much to pay on applications for one hundred times as much water as the stream ever carries, and has a very strong tendency to restrict claims to reasonable amounts.

A further safeguard is a provision that with an application for more than 25 cubic feet per second the state engineer may require the filing of a bond for a sum not exceeding $10,000, conditioned upon completing the works according to the terms of the permit.

### DEFINING RIGHTS

It has been pointed out that there is in most of the states no provision for any determination of what rights are acquired under the notices posted, and a great many rights have been acquired without the posting or filing of any notices. This condition existed in all the states at one time, the adoption of the Wyoming law providing for applications to the state engineer and the examination of works to determine what was done, being the first provision made for any accurate definition of rights as they are acquired. It has therefore been necessary for the states to make provision for defining rights to water after they have been acquired, and most of them have passed laws providing for this. In the states which have not, whenever anyone does not secure the water to which he deems himself entitled he brings suit against the individual or individuals whom he holds responsible for his troubles. It is, of course, possible for him to include as defendants all other parties who are taking water from the same source of supply, but the law makes no definite provision for this. The great disadvantage of this system is that it encourages a multiplicity of suits. The aggrieved party may bring suit against one of his neighbors, and their rights with relation to each other will be defined; but their rights with relation to others will still be wholly undefined, and before a complete determination of the rights will take place, all of those diverting water from a given stream must be parties to the same suit.

Most of the states have recognized the evils of this system, and have attempted to secure a complete determination of rights by

providing that, whenever a suit regarding water rights is brought, the plaintiff may make all those claiming rights to water from the same source of supply parties to the action, and the court may in one decree define the rights of all. The states of Washington and Montana have such provisions, with no further legislation on this subject. Colorado has, in addition, prescribed a special form of procedure for defining water rights. Anyone interested may apply to the court for an adjudication of the rights on a stream, when the court will define the rights of all claimants, not in the form of a suit between the parties, but in the special proceeding. Oregon has modified this practice by providing that, when a suit is brought, the court may call upon the state engineer to make surveys and measurements of the stream, the ditches, and the lands irrigated, in order that the court may have before it, in addition to the testimony of the interested parties, information as to the physical facts relating to the rights of the parties. Idaho also has a similar provision. A weakness of this system of determining rights is that the rights must remain indefinite until someone brings suit or, in Colorado, applies for an adjudication. In Idaho a disposition to avoid adjudications has been manifested, and it has there been found difficult to secure a complete record of rights.

A complete list of rights is needed in order that the administrative officials, or those wishing to acquire rights, may know what rights are already in existence. To provide for this complete adjudication of all rights, laws have been passed in a number of states empowering the state, in one form or another, to begin actions for defining rights. Wyoming was the pioneer in this respect. The constitution adopted in 1890 provided for a board of control, composed of the state engineer and the superintendent of the four divisions into which the state was divided, and gave to this board the right to adjudicate existing rights to water. The law passed in accordance with this constitutional provision provides that the state engineer or his assistants shall survey and measure the streams and ditches and the irrigated lands, and that the superintendents of the water division in which the stream is located shall take testimony as to the dates when the ditches were built and the lands were brought under irrigation. Having before it the testimony of the interested parties and the surveys made by the engineer, the board defines the rights as to date of acquirement and the areas irrigated. This adjudication by the board has been attacked on the ground

that it is a judicial function, and as such belongs to the courts; but the supreme court has held that, while these duties are quasi-judicial, the law is constitutional.

Under this law most of the rights in the state of Wyoming have been adjudicated, and in time there will be a complete and definite list of all the rights to water from the streams of the state. Nebraska, New Mexico, and Nevada have enacted laws providing for adjudications by administrative officials, but have made slight alterations in the Wyoming system. In Nebraska the state engineer makes the surveys, takes the testimony, and prepares a decree defining the rights. If there is a protest against his decision, the state board of irrigation, which corresponds to the Wyoming board of control in a general way, reviews the decision of the state engineer. If there is no protest, the adjudication stands. The Nevada law provides merely that the state engineer shall make a list of the rights.

In order to do this he is to call on all claimants for sworn statements of their rights, make surveys of the streams and ditches, and examine the irrigated lands. From the data secured in this way he prepares a list of rights and issues to each claimant a certificate of his rights.

In 1903 Utah adopted a law providing that the state engineer should make surveys similar to those provided for in Wyoming and the other states, and, when they are completed, file them with the clerk of the district court having jurisdiction of the stream under consideration, and that the court should then hold an adjudication, after properly notifying those claiming rights to water from the stream. Surveys on one stream have been begun, but have not yet been completed, and it remains to be seen whether this law will prove effective in Utah. Idaho adopted a similar law in 1903, but it was declared unconstitutional by the state supreme court, on the ground that the state was not a party in interest and could not bring an action for the determination of rights of other parties. The court, however, upheld the part of the law which provided that the state might intervene in actions brought by water-right holders. The two Dakotas and Oklahoma in 1905 passed laws providing that the engineer shall make the surveys already mentioned and report them to the attorney-general, who shall then bring an action in the proper court and secure an adjudication. No proceedings have been begun under any of these laws, and their constitutionality

and their efficiency have not been tested. The decision of the Idaho court against a similar provision in the Idaho law would probably predispose the courts to declare this provision of the Dakota and Oklahoma laws unconstitutional.

ADMINISTRATION

The fact that the canal-builder owns a water right rather than a particular body of water makes it necessary that there should be some provision for the protection of his rights in addition to the ordinary policing. If he owns a body of water, he can inclose it, and the police officials will protect it; but when he is entitled to a given quantity of water from a stream at a given point, it is impossible for him to inclose it, and it is necessary for him to patrol the entire stream above his own point of diversion, and maintain an armed force sufficient to guard all headgates above his own as well as his own. On the streams where water is scarce and no provisions have been made for administrative officials, it is not uncommon for owners to send armed parties along the stream to close the gates of the canals which are taking the water which the owners of the lower canals claim as their own. These conditions naturally grow more acute as the streams are exhausted.

With exception of California, Oregon, Texas, New Mexico, and Arizona, all the states and territories of the arid region have made some provisions for the appointment of officials to distribute water to those entitled to it. Courts defining rights may, of course, appoint commissioners to enforce their decrees, and this has been done in some cases, notably on the Salt River in Arizona. The absence of any provision for regulating streams in California may be explained by the fact that in the northern part of the state irrigation is not necessary to agricultural operations, and the people of that part of the state have been indifferent to the needs of those in the less populous southern part of the state. The people in the arid section of the state have fought each other until they are tired of it, and have now adopted a live-and-let-live policy, and usually compromise their difficulties rather than go to the court or fight.

Colorado was the first state to provide a comprehensive system of water distribution. The state is divided into divisions on drainage lines, each division being independent of the others, because no streams flow from one to another. These divisions are divided into districts for convenience in administration. There are several

districts on a single stream. There is a state engineer, who has general supervision of the distribution of the waters of the state; and a division engineer for each division, who has charge of the distribution within his division; and a water commissioner for each district, who has direct charge of the diversions from the streams; and, when necessary, the water commissioners appoint assistants. When the rights to a stream have been defined, both as to date and quantity of water, the water commissioner is required to distribute the water in accordance with these decrees. All the rights on the stream are in one series, so that theoretically the oldest right is supplied first, and so on in the order of the dates of their acquirement, so long as the supply holds out. Each water commissioner distributes the water according to the decrees for his own district, disregarding the others entirely except upon orders from the division engineer, whose duty it is to enforce the rights in one district against those in another. The water commissioner has no discretion in this matter, but must obey the orders of the engineer. Anyone aggrieved at any action of the water commissioner may appeal to the division engineer, from the division engineer to the state engineer, and from the state engineer to the courts. The water commissioners are to begin work only when called upon by someone who is not receiving the water to which he deems himself entitled, but when so called upon must enforce priorities. On most streams in Colorado the demand for water has become so great that the water commissioners are on duty practically all the time. On streams which are not fully appropriated the commissioners are not generally called upon until after the flood season is over and water becomes scarce. On streams where the water is all appropriated the commissioner usually maintains a measuring station at the upper end of his district. Every morning he receives a report showing the flow of the stream at this point, and then goes over the stream setting the gates to all the canals in such a way as to give each its proper share of the water. It is a misdemeanor to change a gate which has been set by the water commissioner, and he has the power to make arrests.

This Colorado system has been adopted by Wyoming, Nebraska, Utah, Idaho, Nevada, the Dakotas, and Oklahoma. In Montana the courts rendering the decrees are required to appoint commissioners to enforce them upon application by the owners of one-fourth of the rights included in the decree. In Kansas the courts making

adjudication are required to appoint water bailiffs to enforce them. In Washington the courts are empowered to appoint commissioners. The county commissioners are also empowered to appoint them, and the sheriffs are required to enforce decrees. Very little has been done in Washington, however, by any of these agencies, as there has been no great demand for any distribution of the water. During the past summer, however, in eastern Washington there has been a great deal of trouble. The superintendent of the largest ditch on the Yakima River, and several others interested in this ditch, were arrested for dynamiting the dam of a rival company which threatened to interfere with the water supply of the older company. In Oregon the legislature is empowered to provide for the appointment of water commissioners, but no such provision has yet been made.

MISCELLANEOUS PROVISIONS

In addition to the laws referred to above regarding the acquirement and defining of rights and the distribution of water the arid states have various provisions relating to irrigation. In all of the states the use of water for sale, rental, or distribution is declared to be a public use and subject to the control of the state. Most of the states give to the county commissioners the right to fix rates for the sale of water, but make no further provision. North and South Dakota give this authority to the state engineer. In California the rates fixed by the commissioners have been the subject of a great deal of litigation, one case going to the Supreme Court of the United States, where the law was upheld. The question in most of these cases was not the power of the commissioners to fix the rates, but the reasonableness of the rates fixed, the controversy resting on whether the ditch-owners should be allowed to levy rates which would return a reasonable interest on the amount invested, or on the present value of the works, or on the present cost of duplication. The various courts hearing these cases have decided differently on this question. The Oregon law specifies that "the rates shall not be lower than the prevailing rate of interest on the amount of money actually paid in and employed in the construction and operation of said ditch." Nebraska as yet has made no provision for fixing rates, but the supreme court of the state has held that the legislature has undoubtedly the right to provide for this. There has been in the literature on the subject of irrigation a great deal said on the danger of water monopoly, and as a remedy for this it

has been proposed that water rights should be inseparably attached to the land in connection with which they are acquired. That is, that the water rights could not be sold separately from the land. In fact, water could not be sold at all. Most of the recent laws, however, provide that water rights may be sold under certain conditions. It is my opinion, however, that the laws providing that rates may be fixed by public authority are sufficient safeguard against the exploitation of the farmer by the ditch-owner, especially when power to fix rates is in the county commissioners. These commissioners are elected directly by those who must pay the rates fixed. In an irrigation community the control of the water is the all-important thing, and if serious difficulties arose, commissioners would be elected for the express purpose of fixing rates agreeable to the water-users.

Wyoming has been the only state where transfers of water rights were not allowed, and within the past year the supreme court of the state has ruled that they can be made in that state. Most of the states require that the transfers of water rights shall be made by deed as transfers of real estate, and there is a provision in all the states that such transfers may be made only where the change in the point of diversion will not injure any other water-right holders. Until within the last few years anyone injured sought to restrain the transfers through the courts. In 1901 Colorado enacted a law providing that a party wishing to make a transfer must apply to the courts for permission. On the receipt of such an application the court holds a hearing, and notice is given to all interested parties in order that they may file their objections. The transfers can be made only on permission from the courts after such hearings. In Utah, Idaho, the Dakotas, Nevada, and Oklahoma transfers can be made only upon permission issued by the state engineer, after hearings as in Colorado. In Wyoming those making transfers must notify the state engineer, and he can in his discretion either recognize the transfer or refuse to do so. A party wishing to make the transfer, or anyone objecting to it, may then appeal from the action of the state engineer to the courts. In the other states transfers may still be made, and anyone injured must bring action to prevent the transfer.

All of the states have laws against the waste of water, and those having water commissioners provide that the commissioners must prevent waste. This is, however, very largely a dead letter, as the commissioners usually go no farther than to turn into each ditch

the water to which it is entitled, unless they are notified by the owners that the water is not wanted.

All the states which have made provisions for the distribution of water by public officials require that the ditch-owners shall put headgates and measuring devices in their canals. Some give the water commissioners authority to put in these devices in case the owners neglect to do so, and collect the cost, through the county commissioners, who may tax it against the owners of the ditches; while others give the water commissioners power to refuse to deliver water until the structures are put in. The latter is by far the more effective provision.

### GOVERNMENT AID TO IRRIGATION

In all the states irrigation ditches, the water from which is used by those who own the ditches, are exempted from taxation. Ditches conveying water for sale are subject to taxation, and those conveying water partly to the owners and partly for sale are subject to taxation in proportion as they supply water for sale.

A number of states have provided for the organization of irrigation districts. These are organized under the supervision of the county commissioners, and special proceedings are provided for testing the validity of the organization. These districts are given power to levy taxes to provide for the operating expenses, and for sinking funds to pay off the bonds issued to secure money for construction. This public supervision of the organization and the granting of the power to levy taxes against the lands is for the purpose of giving a standing to the bonds to be sold by the districts, and in that way is an indirect aid to irrigation. It is claimed by some of those engaged in the promotion of irrigation works that the organization of irrigation districts is practically the only way in which capital can now be secured for the construction of such works. The bonds are a lien upon the lands, whereas the bonds of the ordinary irrigation companies are usually secured only by rights and ditches belonging to the company. In Idaho irrigation district plans must also be approved by the state engineer, and the law provides that the state shall pay to districts the benefits accruing to state lands included within their boundaries, the sums paid to be added to the selling price of the land whenever it is disposed of by the state. Nebraska has provided that leaseholds on state lands included within the boundaries of irrigation districts may be taxed for district purposes.

Montana has provided for surveys to determine the irrigability of its state lands, and the present state engineer has interpreted this to empower him, not only to determine the irrigability of the lands, but also to make plans for their irrigation, and endeavor to secure the carrying out of these plans by private parties under contract with the state. The state itself has in the past undertaken the construction of some canals, but has abandoned this. Colorado at one time undertook the construction of canals, using convict labor for this purpose, but has also abandoned the work.

The United States government in 1866 passed a law, previously referred to, recognizing local customs, laws, and decisions. In 1870 this law was amended providing that all patents thereafter issued should state in express terms that the lands were subject to right-of-way for irrigation ditches. In 1894 what is known as the Carey Act was enacted by Congress. This provided for giving to each of the arid states 1,000,000 acres of land, on condition of its reclamation. Prior to the passage of this law irrigation companies had had trouble with parties who filed on the government lands under their canals, and then failed to buy water rights of the companies, but held the land for speculative purposes. The Carey Act was passed in response to these conditions, Senator Carey from Wyoming, father of the law, being extensively interested in a company which had had such trouble. Under the Carey law parties wishing to reclaim areas of government land perfect their plans and apply to the state for the segregation of these lands. These plans, when approved by the state authorities, go to the General Land Office, and, if approved, the lands are withdrawn from entry. The lands are segregated to the state, which makes a contract with the builders of the canal, providing that no one can secure possession of any of these lands except upon presenting evidence that they have contracted with the irrigation company for sufficient water to reclaim the lands. It is the usual practice for the state to sell these lands for 50 cents per acre, the price of the water rights varying under different projects. The largest canal in the United States, that belonging to the Twin Falls Land and Water Company, in the Snake River valley in Idaho, is being built under the Carey law. This provides for the reclamation of 274,000 acres. Lands are sold for 50 cents per acre, and water rights for $25 per acre. Probably not more than one million acres in all of the arid states have been reclaimed under this law, but within the past year or two a large number of projects have been begun, especially in the states of Wyoming and

Idaho. Montana has provided that the state engineer shall, on application, make surveys for Carey-law projects, and shall aid these projects in various ways.

In 1902, what is known as the Reclamation Law was enacted. This provides that the receipts from the sale of public lands shall be used for the construction of irrigation works. The fund from this source at the present time amounts to approximately $30,000,000. A number of projects have been begun, and one, the Truckee-Carson project in Nevada, is so far completed that it is supplying water to a part of the lands to be reclaimed. This work is under the direction of the secretary of the interior, and has by him been intrusted to what is known as the Reclamation Service.

SUMMARY

To summarize what has been said: The United States has turned over the control of irrigation to the states and territories. In acquirement of a water right the irrigator must in about half the states post and file a notice stating what he intends to do; then proceed to build his works and use water. In the other half of the states he must make application to a state official and receive a permit before beginning construction, and must prove construction and use before acquiring title.

In the states where rights have been acquired without public supervision he must have the relation of his rights to other rights to the same source determined in court or by public officials, adjudication being based either on surveys and measurements made by the state, or entirely on the evidence presented by the interested parties.

In all the states but California, Oregon, Texas, New Mexico, and Arizona the water to which the canal-owner is entitled is turned out to him by public officials.

In aid of irrigation most of the states have done nothing directly except exempt irrigation works from taxation.

In 1894 the general government gave to each arid state 1,000,000 acres of land, on condition of its reclamation, and in 1902 set aside the receipts from the sales of public lands for the construction of irrigation works. With the exception of the work begun under this law, all the irrigation works in the United States are private. To secure that complete list of rights, essential to a satisfactory distribution of water, there must be authority for instituting actions to define rights by public authority. Certain states have provided such authority.

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